

## **Oracle CRM 11i "Hornet" Release: JTF Page Prefabrication**

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### **What is JTF Prefab Solving?**

- 20 Milli Sec Page Retrievals .vs. Few Secs
- OSO Pages for Sales, Marketing personnel
  - Page Content is Dynamic based on the user, Caching will NOT Solve it
  - Prefabricate it (my.yahoo.com)!

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## **JTF Prefab Applications (*OSO*) Should Provide**

- List of JSP pages in application (70 pages)
- List of read-only JSP pages (30 pages)
- APP ID, RESP ID for the application
- No Changes To Application Software & Database Schema (*non-intrusive*)

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## **JTF Prefab OSO Prefabrication**

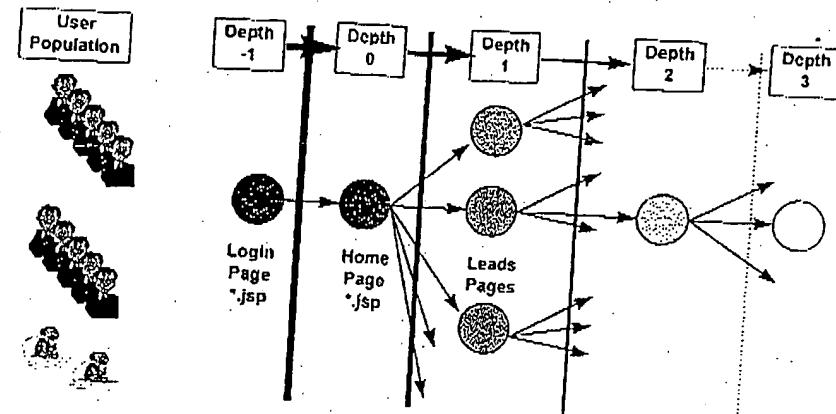
- Total JSP pages: 75
  - read-only pages: 30
- For a sales force of 100:
  - 3000 pages to prefabricate
  - generate per min or 10 mins
- MY.YAHOO.COM:
  - 6 million pages
  - every few minutes

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## JTF Prefab : Fabrication Rate Depth .vs. Staleness of Home Page

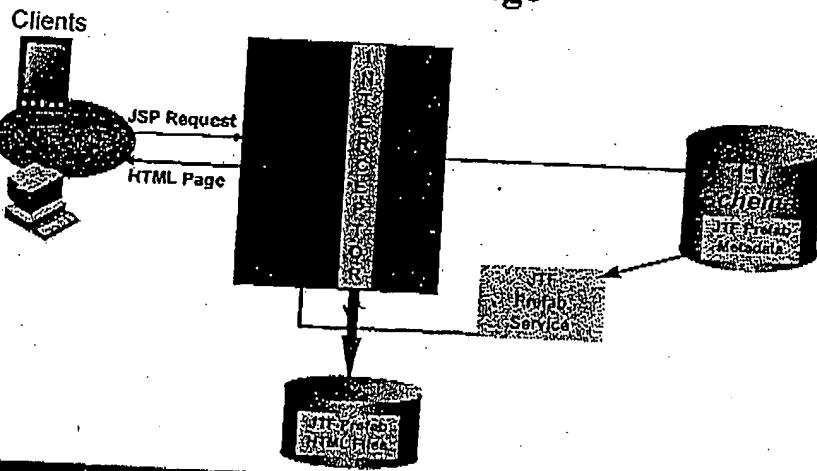


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## JTF Prefab Dynamic -> Static Page

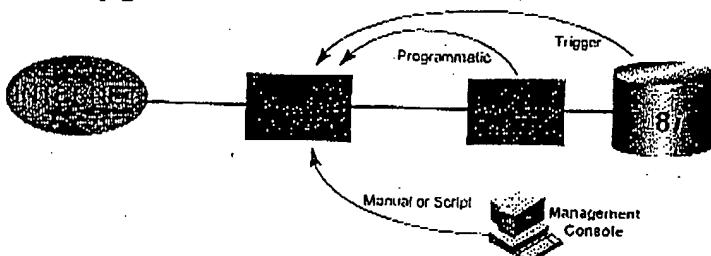


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## IAS Web Cache Calypso Invalidation



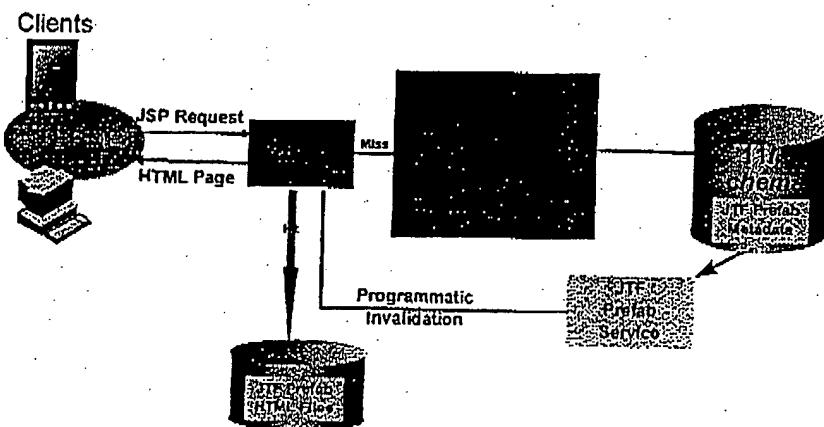
```
GET /x-oracle-cache-invalidate HTTP/1.0
X-Oracle-Cache-Invalidate-URL-Prefix: /catalog
X-Oracle-Cache-Invalidate-Level: 0
```

Invalidates all URLs starting with /catalog (e.g., entire catalog)  
with severity of 0 (i.e., never serve these pages stale)

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## JTF Prefab Working with Calypso

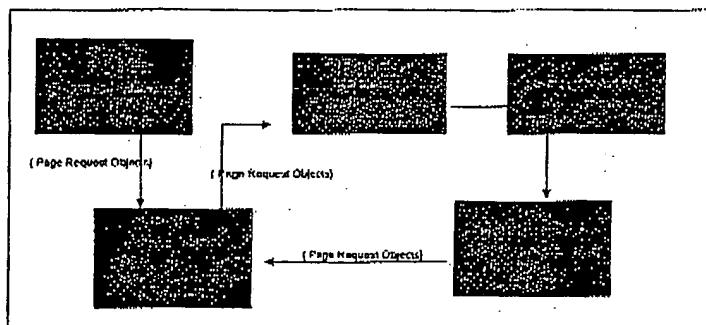


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## JTF Prefab Service Application Components



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## JTF Prefab Service Algorithm

- For RESP ID, APP ID:
  - Get the list of FND USERS
  - Run the prefabricator at  $n$  min (10 min) intervals
- Reduce # of pages to prefabricate using:
  - user access pattern
  - usage statistics
  - etc..

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## JTF Prefab Invalidation Policy

- Timer based invalidation:
  - configure intervals for page regeneration
- Login based invalidation:
  - when user logs in, re-generate user-specific pages
- Event based invalidation:
  - transactional URLs invalidate set of dependent pages

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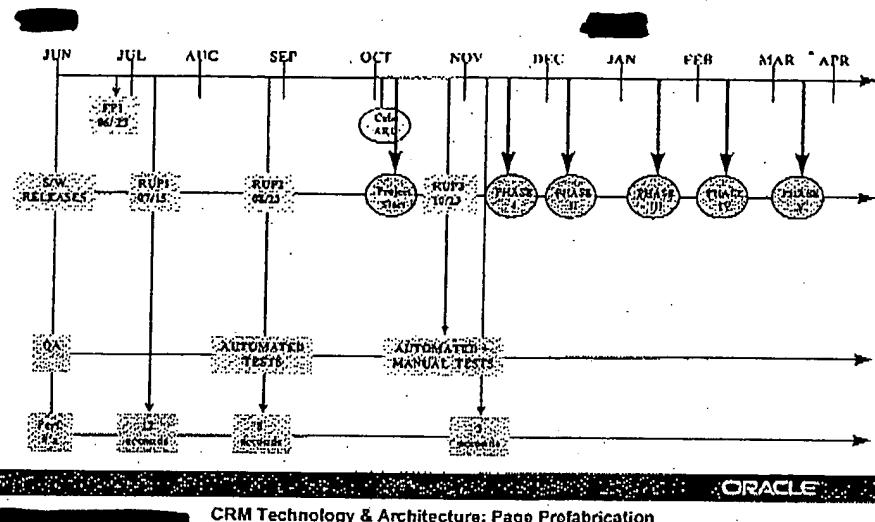
## Caching .vs. Prefabrication Solutions

	<i>Caching</i>	<i>Prefabrication</i>
<i>Problem</i>	Repetitive fetching of same content	First time login of user access patterns
<i>Solutions</i>	Reactive	Pro-active
<i>Pros</i>	App. Neutral,	App. Specific, Utilizes excess CPU & Disk on mid-tier boxes.
<i>Cons</i>	Slow for first time user access.	Too many pages prefabricated

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## CRM JTF: Page Prefabrication Schedule



## CRM JTF : Page Prefabrication Schedule

Phase	Date	Functionality
<i>0</i>		Session Mgmt., Intercept URI requests & serve Fab-Pages
<i>I</i>		Refresh Sales & iSTORE pages in 'm' minutes
<i>II</i>		Feedback of HOT users/ pages
<i>III</i>		Selectively Fabricate pages & "N" Mid-tiers support
<i>IV</i>		Set up and Admin Screens
<i>V</i>		Release
<i>Risk</i>		Selectivity Algorithms & Ease of set up.

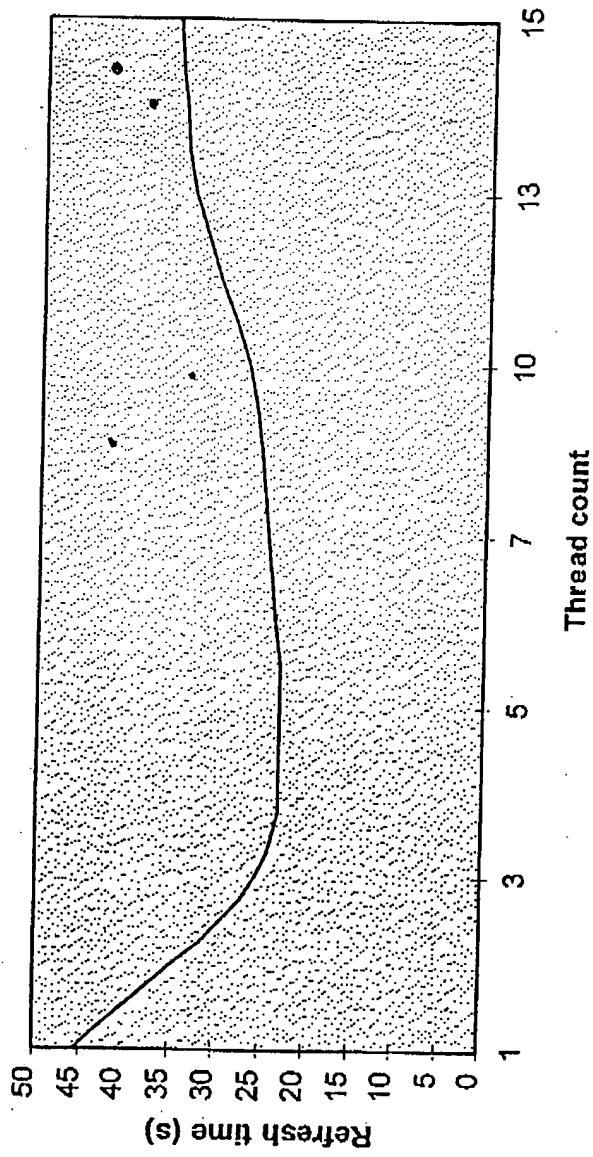
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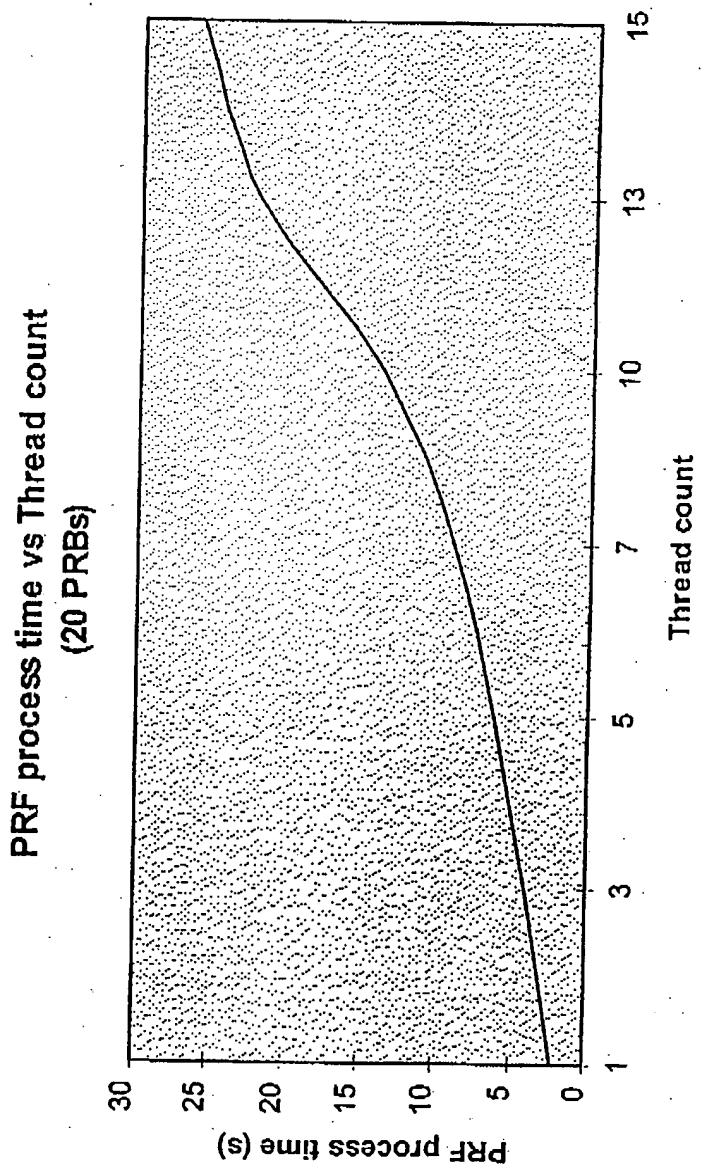
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# Prefabrication Statistics

Refresh time vs Thread count (20 PRBs)

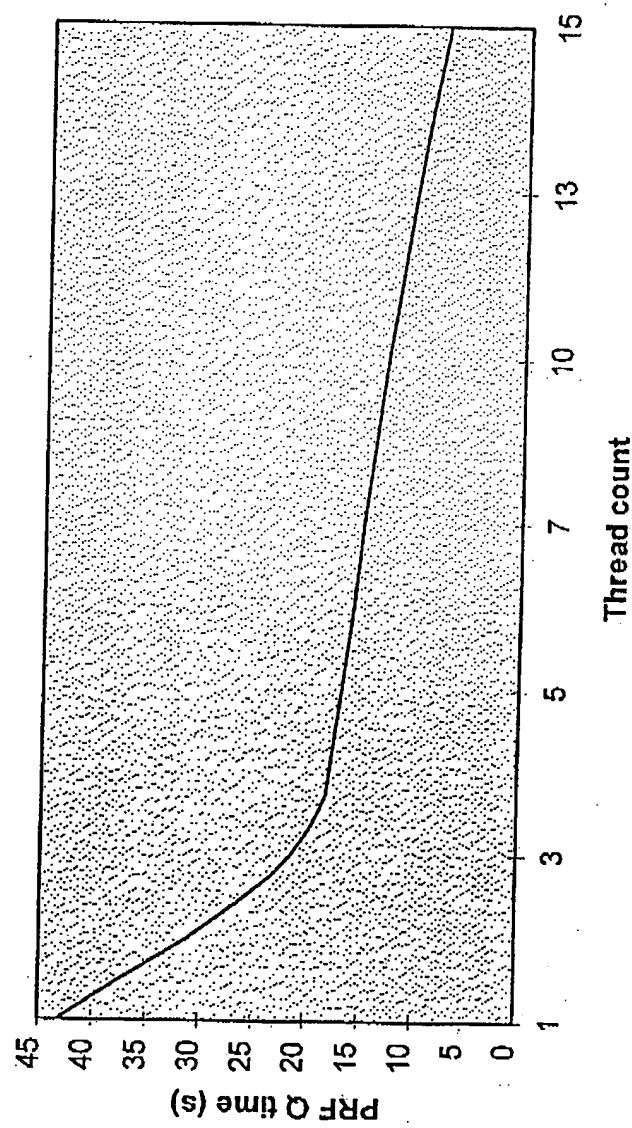


# Prefabrication Statistics

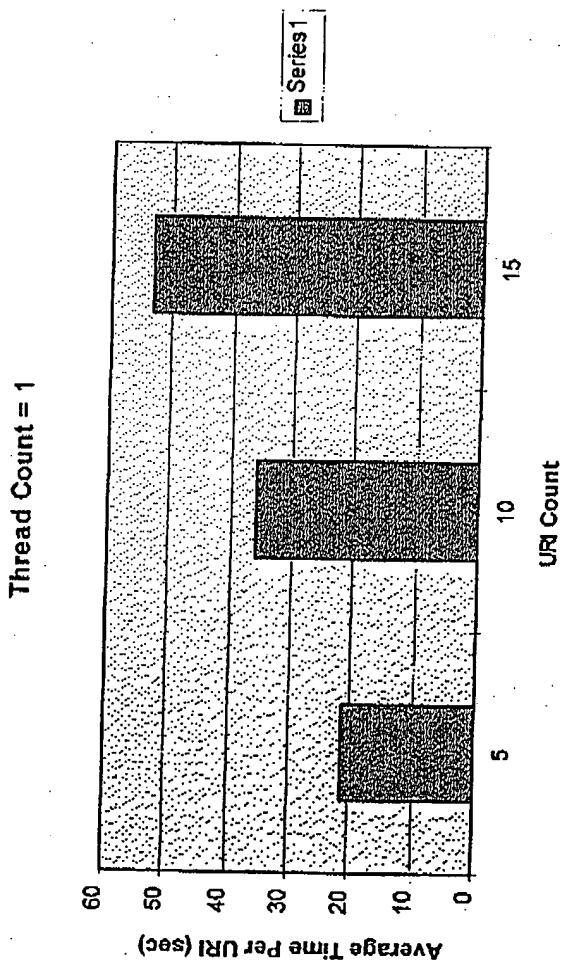


# Prefabrication Statistics

PRF Q time vs Thread count (20 PRBs)



# Prefabrication Statistics



Estimate for 7000 URIs = 3010sec per URI (50 min/URI)

# Response Time For Home Page

Without Prefabrication: 3.76 sec

With Prefabrication: 0.53 sec

(Values measured using Load Runner)

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